

Claims

1. A method for ascertaining the pole wheel position in electrical machines (1),
5 for example rotary current generators, with pulse inverters, a rotor excitation device (2), a
stator (4) provided with inductances (4.1, 4.2, 4.3); (20, 21, 22), and a voltage source (7)
between two branch terminals (5), characterized in that by means of switch elements (15,
16), a split into two branches (13, 14) can be produced, in which the respective branch
voltage curves (17 and 18) are measured, the superposition of which permits the pole
10 wheel position (11) to be definitely ascertained.

2. The method according to claim 1, characterized in that the voltage source (7) is
an alternating voltage source with a voltage curve (12; 17, 18) that changes over time.

15 3. The method according to claim 1, characterized in that the voltage source (7) is
an alternating voltage source with a sinusoidal voltage curve (12; 17, 18).

4. The method according to claim 1, characterized in that the windings (4.1, 4.2,
4.3) of the stator (4) are wired in a star-shaped circuit.

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5. The method according to claim 1, characterized in that the windings (20, 21,
22) of the stator (4) are wired in a triangular circuit.

6. The method according to claim 1, characterized in that the in the first switch
25 position (15.1 and 16.1), the voltage curve (18) u_R is measured in an inner branch (13).

7. The method according to claim 1, characterized in that in the second switch
position (15.2 and 16.2), the voltage curve (17) u_C is measured in the outer branch (13).

8. The method according to claims 6 or 7, characterized in that the rotor position (11) for each of the voltage curves (17, 18) is stored in tabular form and can be transferred to similar electrical machines (1).

5 9. The method according to one or more of the preceding claims, characterized in that during the starting phase of the rotary current generator (1), the rotor or pole wheel position corresponds to the rotor or pole wheel position in which it is possible to exert the maximal possible torque to the drive shaft of the electrical machine (1).